

Serial Number: 09/756,983

ENTERED

- ☐ Changed a file from non-ASCII to ASCII
- ☐ Changed the margins in cases where the sequence text was "wrapped" down to the next line. ~~0460~~
- ☐ Edited a format error in the Current Application Data section, specifically: ~~02-8-d~~
- ☒ Edited the Current Application Data section with the actual current number. The number inputted by the applicant was ☐ the prior application data; or ☐ other #2
- ☐ Added the mandatory heading and subheadings for "Current Application Data".
- ☐ Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer.
- ☐ Changed the spelling of a mandatory field (the headings or subheadings), specifically:
- ☐ Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were:
- ☐ Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited:
- ☐ Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place.
- ☐ Inserted colons after headings/subheadings. Headings edited included:
- ☐ Deleted extra, invalid, headings used by an applicant, specifically:
- ☒ Deleted: ☒ non-ASCII "garbage" at the beginning/end of files; ☐ secretary initials/filename at end of file; ☐ page numbers throughout text; ☐ other invalid text, such as
- ☐ Inserted mandatory headings, specifically:
- ☐ Corrected an obvious error in the response, specifically:
- ☐ Edited identifiers where upper case is used but lower case is required, or vice versa.
- ☐ Corrected an error in the Number of Sequences field, specifically:
- ☐ A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted.
- ☐ Deleted ending stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly (error due to a PatentIn bug). Sequences corrected:
- ☒ Other: Seq. 1 - corrected amino acid numbering

EXaminer: The above corrections must be communicated to the applicant in the first Office Action. DO NOT send a copy of this form. 3/1/95

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/756,983

DATE: 02/13/2001

TIME: 08:41:47

Input Set : N:\Crf3\02052001\I756983.raw

Output Set: N:\CRF3\02132001\I756983.raw

1 <110> APPLICANT: Albani, Salvatore
 2 <120> TITLE OF INVENTION: METHODS FOR ISOLATION, QUANTIFICATION,
 3 CHARACTERIZATION AND MODULATION OF
 4 ANTIGEN-SPECIFIC T CELLS
 5 <130> FILE REFERENCE: 246/285-CIP
 6 <140> CURRENT APPLICATION NUMBER: US/09/756,983
 7 <141> CURRENT FILING DATE: 2001-01-09
 8 <150> PRIOR APPLICATION NUMBER: 60/105,018
 9 <151> PRIOR FILING DATE: 1998-10-20
 10 <150> PRIOR APPLICATION NUMBER: 09/421,506
 11 <151> PRIOR FILING DATE: 1999-10-19
 12 <150> PRIOR APPLICATION NUMBER: PCT/US99/2466
 13 <151> PRIOR FILING DATE: 1999-10-19
 14 <160> NUMBER OF SEQ ID NOS: 24
 15 <170> SOFTWARE: FastSEQ for Windows Version 4.0
 17 <210> SEQ ID NO: 1
 18 <211> LENGTH: 17
 19 <212> TYPE: PRT
 20 <213> ORGANISM: Artificial Sequence
 21 <220> FEATURE:
 22 <223> OTHER INFORMATION: Synthesized peptide derived from third hyper V
 23 region of IE molecule Mus musculus
 24 <400> SEQUENCE: 1
 25 Ala Ser Phe Glu Ala Gln Gly Ala Leu Ala Asn Ile Ala Val Asp Lys
 26 1 5 10 15
 27 Ala
 29 <210> SEQ ID NO: 2
 30 <211> LENGTH: 15
 31 <212> TYPE: PRT
 32 <213> ORGANISM: Artificial Sequence
 33 <220> FEATURE:
 34 <223> OTHER INFORMATION: Synthesized peptide derived from bovine I protein
 35 of Epstein Barr virus
 36 <400> SEQUENCE: 2
 37 Thr Arg Asp Asp Ala Glu Tyr Leu Leu Gly Arg Glu Ser Val Leu
 38 1 5 10 15
 40 <210> SEQ ID NO: 3
 41 <211> LENGTH: 16
 42 <212> TYPE: PRT
 43 <213> ORGANISM: Artificial Sequence
 44 <220> FEATURE:
 45 <223> OTHER INFORMATION: Synthesized peptide derived from the hemophilus
 46 influenza virus
 47 <400> SEQUENCE: 3
 48 Thr Ser Phe Pro Met Arg Gly Asp Leu Ala Lys Arg Glu Pro Asp Lys
 49 1 5 10 15
 51 <210> SEQ ID NO: 4

RAW SEQUENCE LISTING
 PATENT APPLICATION: US/09/756,983

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Input Set : N:\Crf3\02052001\I756983.raw
 Output Set: N:\CRF3\02132001\I756983.raw

52 <211> LENGTH: 36
 53 <212> TYPE: PRT
 54 <213> ORGANISM: Artificial Sequence
 55 <220> FEATURE:
 56 <223> OTHER INFORMATION: Synthesized peptide derived from the TCR receptor
 57 gene of Mus musculus
 58 <400> SEQUENCE: 4
 59 Leu His Ile Ser Ala Val Asp Pro Glu Asp Ser Ala Val Tyr Phe Cys Ala Ser
 60 1 5 10 15
 61 Ser Gln Glu Phe Phe Ser Ser Tyr Glu Gln Tyr Phe Gly Pro Gly Thr
 62 20 25 30
 63 Arg Leu
 64 35
 66 <210> SEQ ID NO: 5
 67 <211> LENGTH: 9
 68 <212> TYPE: PRT
 69 <213> ORGANISM: Artificial Sequence
 70 <220> FEATURE:
 71 <223> OTHER INFORMATION: Synthesized peptide derived from the influenza virus
 72 <400> SEQUENCE: 5
 73 Gly Ile Leu Gly Phe Val Phe Thr Leu
 74 1 5
 76 <210> SEQ ID NO: 6
 77 <211> LENGTH: 9
 78 <212> TYPE: PRT
 79 <213> ORGANISM: Artificial Sequence
 80 <220> FEATURE:
 81 <223> OTHER INFORMATION: Synthesized peptide derived from the influenza virus
 82 <400> SEQUENCE: 6
 83 Val Lys Leu Gly Glu Phe Tyr Asn Gln
 84 1 5
 86 <210> SEQ ID NO: 7
 87 <211> LENGTH: 11
 88 <212> TYPE: PRT
 89 <213> ORGANISM: Artificial Sequence
 90 <220> FEATURE:
 91 <223> OTHER INFORMATION: Synthesized peptide totally artificial
 92 <223> OTHER INFORMATION: Xaa in position 2 stands for cyclohexylalanine
 93 <400> SEQUENCE: 7
 94 Lys Xaa Val Ala Ala Trp Thr Leu Lys Ala Ala
 95 1 5 10
 97 <210> SEQ ID NO: 8
 98 <211> LENGTH: 13
 99 <212> TYPE: PRT
 100 <213> ORGANISM: Artificial Sequence
 101 <220> FEATURE:
 102 <223> OTHER INFORMATION: Synthesized peptide derived from the influenza virus
 103 <400> SEQUENCE: 8
 104 Pro Lys Tyr Val Lys Gln Asn Thr Leu Lys Leu Ala Thr

W-OK

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/756,983

DATE: 02/13/2001

TIME: 08:41:47

Input Set : N:\Crf3\02052001\I756983.raw

Output Set: N:\CRF3\02132001\I756983.raw

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105          1          5          10
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109 <212> TYPE: PRT
110 <213> ORGANISM: Artificial Sequence
111 <220> FEATURE:
112 <223> OTHER INFORMATION: Synthesized peptide derived from the ovalbumin
113      of Mus musculus
114 <400> SEQUENCE: 9
115      Ile Ser Gln Ala Val His Ala Ala His Ala Glu Ile Asn Glu Ala Gly
116          1          5          10          15
117      Arg
119 <210> SEQ ID NO: 10
120 <211> LENGTH: 15
121 <212> TYPE: PRT
122 <213> ORGANISM: E. coli
123 <220> FEATURE:
124 <223> OTHER INFORMATION: dnaJpl heat shock protein
125 <400> SEQUENCE: 10
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127          1          5          10          15
129 <210> SEQ ID NO: 11
130 <211> LENGTH: 15
131 <212> TYPE: PRT
132 <213> ORGANISM: Homo sapiens
133 <400> SEQUENCE: 11
134      Gln Lys Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly
135          1          5          10          15
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138 <211> LENGTH: 9
139 <212> TYPE: PRT
140 <213> ORGANISM: Homo sapiens
141 <400> SEQUENCE: 12
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143          1          5
145 <210> SEQ ID NO: 13
146 <211> LENGTH: 9
147 <212> TYPE: PRT
148 <213> ORGANISM: Homo sapiens
149 <400> SEQUENCE: 13
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151          1          5
153 <210> SEQ ID NO: 14
154 <211> LENGTH: 13
155 <212> TYPE: PRT
156 <213> ORGANISM: Homo sapiens
157 <400> SEQUENCE: 14
158      Pro Lys Tyr Val Lys Gln Asn Thr Leu Lys Leu Ala Thr
159          1          5          10

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RAW SEQUENCE LISTING

DATE: 02/13/2001

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TIME: 08:41:47

Input Set : N:\Crf3\02052001\I756983.raw

Output Set: N:\CRF3\02132001\I756983.raw

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161 <210> SEQ ID NO: 15
162 <211> LENGTH: 313
163 <212> TYPE: PRT
164 <213> ORGANISM: Artificial Sequence
165 <220> FEATURE:
166 <223> OTHER INFORMATION: Fusion constructs with human and bacterial sequences
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168 Met Gly His Thr Arg Gln Gly Thr Ser Pro Ser Lys Cys Pro Tyr
169 1 5 10 15
170 Leu Asn Phe Phe Gln Leu Leu Val Leu Ala Gly Leu Ser His Phe Cys
171 20 25 30
172 Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu
173 35 40 45
174 Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile
175 50 55 60
176 Tyr Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp
177 65 70 75 80
178 Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr
179 85 90 95
180 Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly
181 100 105 110
182 Thr Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg
183 115 120 125
184 Glu His Leu Ala Glu Val Thr Leu Ser Val Lys Ala Asp Phe Pro Thr
185 130 135 140
186 Pro Ser Ile Ser Asp Phe Glu Ile Pro Thr Ser Asn Ile Arg Arg Ile
187 145 150 155 160
188 Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Ser Trp Leu
189 165 170 175
190 Glu Asn Gly Glu Glu Leu Asn Ala Ile Asn Thr Thr Val Ser Gln Asp
191 180 185 190
192 Pro Glu Thr Glu Leu Tyr Ala Val Ser Glu Phe Gly Gly Ser Gly Gly
193 195 200 205
194 Ser Ala Thr Pro Gln Asn Ile Thr Asp Leu Cys Ala Glu Tyr His Asn
195 210 215 220
196 Thr Gln Ile His Thr Leu Asn Asp Lys Ile Phe Ser Tyr Thr Glu Ser
197 225 230 235 240
198 Leu Ala Gly Lys Arg Glu Met Ala Ile Ile Thr Phe Lys Asn Gly Ala
199 245 250 255
200 Thr Phe Gln Val Glu Val Pro Gly Ser Gln His Ile Asp Ser Gln Lys
201 260 265 270
202 Lys Ala Ile Glu Arg Met Lys Asp Thr Leu Arg Ile Ala Tyr Leu Thr
203 275 280 285
204 Glu Ala Lys Val Glu Lys Leu Cys Val Trp Asn Asn Lys Thr Pro His
205 290 295 300
206 Ala Ile Ala Ala Ile Ser Met Ala Asn
207 305 310
209 <210> SEQ ID NO: 16
210 <211> LENGTH: 942

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RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/756,983

DATE: 02/13/2001
TIME: 08:41:47

Input Set : N:\Crif3\02052001\I756983.raw
Output Set: N:\CRF3\02132001\I756983.raw

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211 <212> TYPE: DNA
212 <213> ORGANISM: Artificial Sequence
213 <220> FEATURE:
214 <223> OTHER INFORMATION: Fusion constructs with human and bacterial sequences
215 <400> SEQUENCE: 16
216 atggggcaca caggaggca gggaacatca ccatacaagt gtccatacct caatttcitt 60
217 cagctcttgg tgetggetgg tctttctcac ttctgttcag gtgttatcca cgtgaccaag 120
218 gaagtgaag aagtggcaac gctgtcctgt ggtcacaatg tttctgttga agagctggca 180
219 caaactcgca tctactggca aaaggagaag aaaatggtgc tgactatgat gtctggggac 240
220 atgaatatat ggcccgagta caagaaccgg accatctttg atatcaactaa taacctctcc 300
221 attgtgatec tggtctgctg cccatctgac gagggcacat acgagtgtgt tgttctgaag 360
222 tatgaaaaag acgctttcaa gcgggaacac ctggctgaag tgacgttacc agtcaaagct 420
223 gacttcccta cactagatat atctgaattt gaaattccaa ctctaatat tagaaggata 480
224 atttgtctca cctctggagg ttttccagag cctcacctct cctggttggg aaatggagaa 540
225 gaattaaatg ccatacaac aacagtttcc caagatcctg aaactgagct ctatgctgtt 600
226 agcgaattcg gcggtccgg tggtagcgcc acacctcaa atattactga tttgtgtgca 660
227 gaataccaca acacacaaat acatacgtca aatgataaga tattttcgta tacagaatct 720
228 ctagtggaa aaagagagat ggctatcatt acttttaaga atggtgcaac ttttcaagta 780
229 gaagtaccag gtatgcaaca tatagattca caaaaaaag cgattgaaag gatgaaggat 840
230 acctgagga ttgcatact tactgaagct aaagtcgaaa agttatgtgt atggaataat 900
231 aaaacgcctc atgctgttgc cgcaattagt atggcaaati aa 942
233 <210> SEQ ID NO: 17
234 <211> LENGTH: 1056
235 <212> TYPE: DNA
236 <213> ORGANISM: Artificial Sequence
237 <220> FEATURE:
238 <223> OTHER INFORMATION: Fusion constructs with human and bacterial sequences
239 <400> SEQUENCE: 17
240 atgggactga gtaacattct ctttgtgatg gccttctgct tctctggtgc tgcctctctg 60
241 aagattcaag cttatttcaa tgagactgca gacctgccat gccaatitgc aaactctcaa 120
242 aaccaaagcc tgagtgaact agtagtattt tggcaggacc aggaaaaact ggttctgaat 180
243 gaggtatact taggcaaaga gaaatttgac agtgttcatt ccaagtatat gggccgcaca 240
244 agttttgatt cggacagttg gacctgaga cttcacaatc ttcagatcaa ggacaagggc 300
245 ttgtatcaat gtatcatcca tcacaaaaag cccacaggaa tgattcgcat ccaccagatg 360
246 aattctgaac tgtcagtgtc tgcatacttc agtcaacctg aaatagtacc aatttctaat 420
247 ataacagaaa atgtgtacat aaatttgacc tgcctatcta tacacggtta cccagaacct 480
248 aagaagatga gtgttttgc aagaaccaag aaltcaacta tcgagtatga tggattatg 540
249 cagaaatctc aagataatgt cacagaactg tacgaagttt ccatacagct gtctgtttca 600
250 ttccctgatg ttacagagca tatgacctc ttctgtatto tggaaactga caagacgcgc 660
251 cttttatctt cacttttctc tatagagctt gaggaacctc agcctcccc agaccacgaa 720
252 ttccggcgct ccggtggtag cggcacacct caaaatatta ctgattttgt tgcagaatac 780
253 cacaacacac aaatacatag gctaaatgat aagatatttt cgtatacaga atctctagct 840
254 ggaaaaagag agatggctat cattactttt aagaatggtg caacttttca agtagaagta 900
255 ccaggtagtc aacatataga ttacacaaaa aaagcgattg aaaggatgaa ggataacctg 960
256 aggattgcat atcttactga agctaaagtc gaaaagttat gtgtatggaa taataaaacg 1020
257 cctcatgcga ttgccgcaat tagtatggca aattaa 1056
259 <210> SEQ ID NO: 18
260 <211> LENGTH: 351
261 <212> TYPE: PRT

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VERIFICATION SUMMARY

PATENT APPLICATION: US/09/756,983

DATE: 02/13/2001

TIME: 08:41:48

Input Set : N:\Crf3\02052001\I756983.raw

Output Set: N:\CRF3\02132001\I756983.raw

L:94 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:7
L:94 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:7
L:94 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:7

OIEP

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/756,983

DATE: 02/13/2001

TIME: 08:09:09

Input Set : N:\Crf3\02052001\I756983.raw

Output Set: N:\CRF3\02132001\I756983.raw

Does Not Comply
Corrected Diskette Needed

1 <110> APPLICANT: Albani, Salvatore
 2 <120> TITLE OF INVENTION: METHODS FOR ISOLATION, QUANTIFICATION,
 3 CHARACTERIZATION AND MODULATION OF
 4 ANTIGEN-SPECIFIC T CELLS
 5 <130> FILE REFERENCE: 246/285-CIP
 6 <140> CURRENT APPLICATION NUMBER: US/09/756,983
 7 <141> CURRENT FILING DATE: 2001-01-09
 8 <150> PRIOR APPLICATION NUMBER: 60/105,018
 9 <151> PRIOR FILING DATE: 1998-10-20
 10 <150> PRIOR APPLICATION NUMBER: 09/421,506
 11 <151> PRIOR FILING DATE: 1999-10-19
 12 <150> PRIOR APPLICATION NUMBER: PCT/US99/2466
 13 <151> PRIOR FILING DATE: 1999-10-19
 14 <160> NUMBER OF SEQ ID NOS: 24
 15 <170> SOFTWARE: FastSEQ for Windows Version 4.0

ERRORED SEQUENCES

17 <210> SEQ ID NO: 1
 18 <211> LENGTH: 17
 19 <212> TYPE: PRT
 20 <213> ORGANISM: Artificial Sequence
 21 <220> FEATURE:
 22 <223> OTHER INFORMATION: Synthesized peptide derived from third hyper V
 23 region of IE molecule Mus musculus
 24 <400> SEQUENCE: 1
 25 Ala Ser Phe Glu Ala Gln Gly Ala Leu Ala Asn Ile Ala Val Asp Lys
 E--> 26 1 5 10 15 *misaligned*
 27 Ala
 439 <210> SEQ ID NO: 24
 440 <211> LENGTH: 285
 441 <212> TYPE: PRT
 442 <213> ORGANISM: Artificial Sequence
 443 <220> FEATURE:
 444 <223> OTHER INFORMATION: Fusion constructs with human and bacterial sequences
 445 <400> SEQUENCE: 24
 446 Met Val Cys Leu Lys Phe Pro Gly Gly Ser Cys Met Ala Ala Leu Thr
 447 1 5 10 15
 448 Val Thr Leu Met Val Leu Ser Ser Pro Leu Ala Leu Ala Gly Asp Thr
 449 20 25 30
 450 Arg Pro Arg Phe Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn
 451 35 40 45
 452 Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu
 453 50 55 60
 454 Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr
 455 65 70 75 80

RAW SEQUENCE LISTING

DATE: 02/13/2001

PATENT APPLICATION: US/09/756,983

TIME: 08:09:09

Input Set : N:\Crf3\02052001\I756983.raw

Output Set: N:\CRF3\02132001\I756983.raw

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456      Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu
457                85                      90                      95
458      Leu Glu Gln Lys Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr
459                100                    105                    110
460      Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val Tyr Pro Glu Val
461                115                    120                    125
462      Thr Val Tyr Pro Ala Lys Thr Gln Pro Leu Gln His His Asn Leu Leu
463                130                    135                    140
464      Val Cys Ser Val Asn Gly Phe Tyr Pro Gly Ser Ile Glu Val Arg Trp
465                145                    150                    155                    160
466      Phe Arg Asn Gly Gln Glu Glu Lys Thr Gly Val Val Ser Thr Gly Leu
467                165                    170                    175
468      Ile Gln Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met Leu Glu Thr
469                180                    185                    190
470      Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu His Pro Ser
471                195                    200                    205
472      Leu Thr Ser Pro Leu Thr Val Glu Trp Arg Ala Arg Ser Glu Ser Ala
473                210                    215                    220
474      Gln Ser Lys Gly Gly Ser Gly Gly Ser Ala Gln Leu Lys Lys Lys Leu
475                225                    230                    235                    240
476      Gln Ala Leu Lys Lys Lys Asn Ala Gln Leu Lys Gln Lys Leu Gln Ala
477                245                    250                    255
478      Leu Lys Lys Lys Leu Ala Gln Gly Ser Gly Gly Ser Ala Gly Gly Gly
479                260                    265                    270
480      Leu Asn Asp Ile Phe Glu Ala Gln Lys Ile Glu Trp His
481                275                    280                    285
E--> 482      1
E--> 483      2

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VERIFICATION SUMMARY

DATE: 02/13/2001

PATENT APPLICATION: US/09/756,983

TIME: 08:09:10

Input Set : N:\Crif3\02052001\I756983.raw

Output Set: N:\CRF3\02132001\I756983.raw

L:26 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
L:94 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:7
L:94 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:7
L:94 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:7
L:482 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:24
M:332 Repeated in SeqNo=24